Chapter 7: Knowledge to Navigate College

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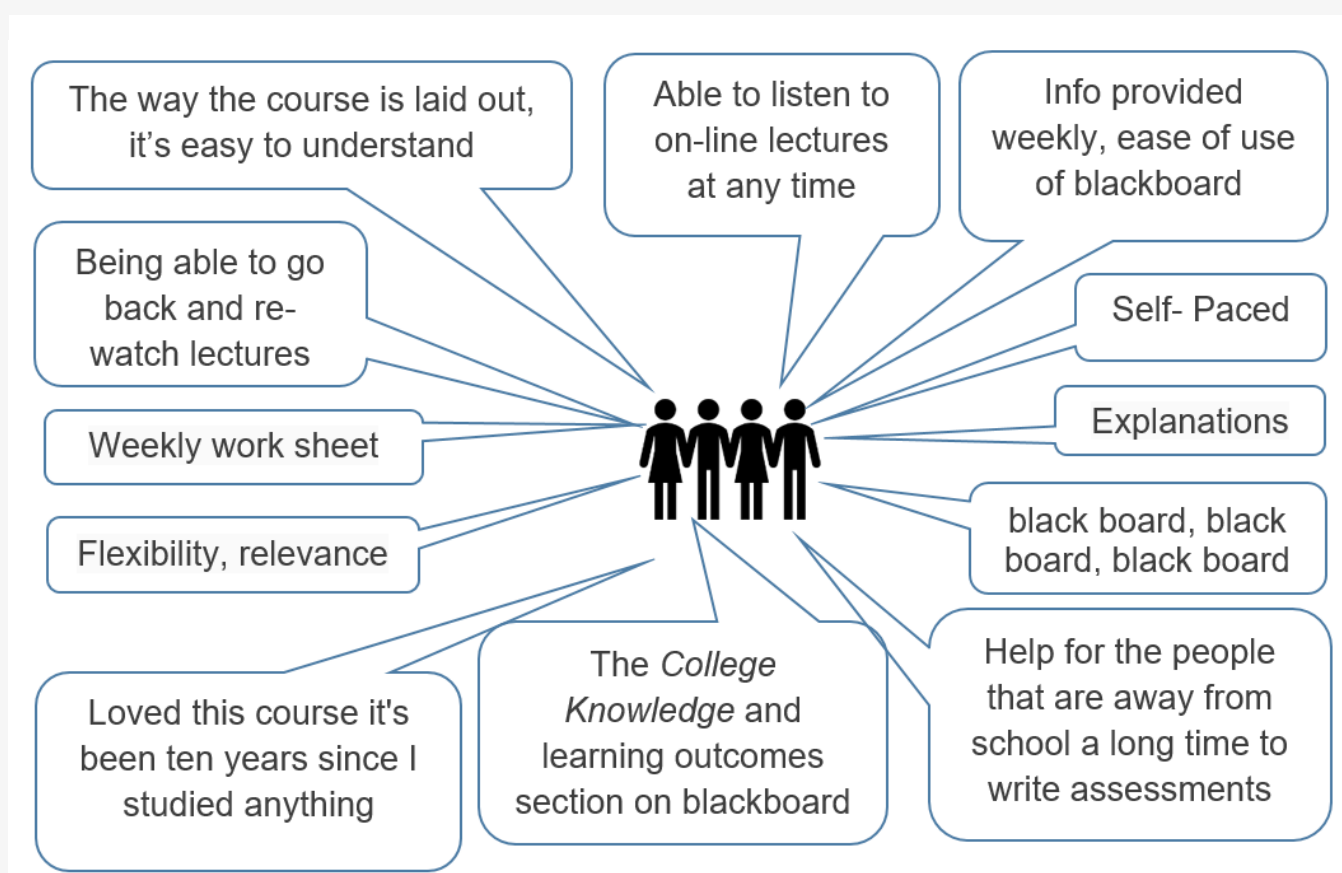**Collaborating Partner**   Anna Noble, Programme Administrator, **anna.noble@ucd.ie**

Figure 1: What (three things) most helped your learning?

Programme Name	**UCD Certificate in Safety and Health at Work CTLSC011**
Universal Design Principles	- Equitable use - Flexibility in use - Simple and intuitive - Tolerance for error - A community of learners
Discipline	Occupational Safety and Health
Level	UCD levels 1
College	Health and Agricultural Sciences
Programme Learning Outcomes	**On successful completion of this programme, students should:** - be able to demonstrate knowledge of the principles of occupational safety and health management and an understanding of the legislative environment under which occupational safety and health is managed in Ireland - be able to apply the principles of hazard identification and risk assessment and advise management on implementing the hierarchy of controls in a low risk environment - be able to advise on appropriate health and safety management strategies and know when to call in professional OSH expertise - access and communicate information on a wide range of OSH hazards and risks in a professional manner - be an advocate for safe working practices and a positive safety culture - have developed transferable skills that will enable them to become lifelong learners

Introduction and context

Transition from the workplace to the University is always challenging for mature students (Murphy and Fleming, 2000), and in practise can be more challenging when staff rarely meet students face to face. We have offered a distance education, part-time 20-credit Certificate in Safety and Health at Work for working adults with an interest in Occupational Safety and Health (OSH) for many years. In September 2013, in response to recessionary demographic changes, we moved from distance to online delivery, and the Certificate programme now uses a blend of online activities over two semesters, combined with four days of live face-to-face engagement in UCD (or in an in-company centre). Teaching methods include:

1. Asynchronous online lectures;
2. Bespoke online educational resources;
3. A Weekly Workbook that guides students through their tasks;
4. Tutor-led online discussion fora;
5. Tutor-led Blackboard Collaborate tutorials; and
6. Tutor-led problem-based live tutorials (online x 3 and on-campus x 4).

Since going online, we have developed a suite of online orientation and study supports, not previously necessary. We placed together in a framework that we have labelled 'College Knowledge' (using Murphy and Fleming's term), to help students to navigate the system and to settle into third level study. Our resources are delivered in a just-in-time, take-it-or-leave-it manner, and while none are subject specific, all are bespoke to the programme. Universal Design is embedded in the design of the system.

Why Universal Design for this programme?

Our students work full-time, have work and domestic commitments and don't put aside time for settling in to the University. They rarely use the excellent resources and advice provided on the institution's website, or our bespoke programme handbooks. Settling-in information is often gleaned from other students, and can be based on assumptions rather than fact, further compounding transition challenges.

Design of our resources was based on adult education principles, which include the values of student-support, adult-friendliness, work-relatedness, accessibility and professional relevance, and were designed for working adults of differing ages, educational and work backgrounds, and learning abilities. The overlap between the principles of adult education and Universal Design is large. Rather than our making a conscious decision to use Universal

Design, it emerged from many programme components; for example, the use of blended learning makes the programme more accessible from geographic and time perspectives, and the consequent reduction in travel requirements accommodates students' competing work and family commitments.

Design and implementation

Design of the system of supports described in this chapter did not originally follow any pre-conceived plan. Individual components evolved iteratively, taking account of feedback from students and tutors, and the experiences of programme staff. Linking the resources to each other, and presenting them collectively under a 'brand' (so-called College Knowledge) was introduced to increase its visibility.

Because the supports are presented in a 'take-it-or-leave-it' manner, they accommodate students with diverse learning abilities allowing for **Equitable use**. The student cohort is male-dominated (about 70%), typically aged early to mid-thirties, with a range from early twenties to retirement. Students usually have new or impending work-related OSH responsibilities or seek career enhancement. Like any working adult cohort, they bring years of work experience, and have a lot to learn

from and teach one another. In contrast to many disciplines, an OSH student's choice of programme level is dictated by the degree of OSH responsibility held or planned. Thus applicants' highest education level consistently ranges from Inter/Junior/Leaving Certificate, through apprenticeships, trades and vocational qualifications, to Diplomas and Degrees, including MSc and PhD degrees (i.e. Irish level 5 to 9). We know from application data that this is the first college experience for about half of students on this programme. Some graduate entrants attained their degree decades previously, when college systems and learning methods were very different. The transition from work (where students hold a lot of responsibility) to the University (where everything from the systems to the content is new) can be very challenging and time-consuming. The process of adults becoming a University student and settling into the system has been labelled as "a significant social displacement" (Biggs et al, 2012, p.3). We designed our 'College Knowledge' resources to ease this transition and to make it user-friendly for students who are new to any University or new to this University. Some of the 'College Knowledge' components are illustrated in Figures 2 to 5.

Most students' first introduction to our resources is a Studying Effectively E-Lecture, which is provided on our website

for applicants. It is designed to reassure applicants with no previous third level experience, and to give them a sense of what will be expected of them. Remaining components are introduced as needed.

Figure 2: College Knowledge Factsheets and E-lectures on Blackboard

Figure 3: Sample College Knowledge Factsheet

The design incorporates **Flexibility in use** as it accommodates individuals' personal learning preferences. College Knowledge resources are designed to sit alongside the curriculum; none are essential components for credit. Effectively students can take them or leave them; and if they take them, they can use them whenever and as often as they wish.

Students are directed (by the Weekly Workbook) to Study Skills E-lectures or Factsheets exactly when they first need them, and thereafter relevant resources can be quickly re-navigated to find advice on any issue when it arises again.

The Articulate Storyline software used to create E-Lectures has menu and search facilities that allow students to move quickly to any topic within a lecture; being able to get quickly to a point in a lecture facilitates subsequent and repeated use of a resource by students.

Figure 4: Sample College Knowledge Online Guide

Figure 5: Sample Blended Learning Weekly Workbook

The curriculum content (online lectures and resources) is accessible 24/7 once a student has a good broadband connection. Content is addressed using different modes, which effectively present the core material in several ways, so that students with different learning styles, educational backgrounds and learning abilities can use their preferred mode in different contexts. Modes include the online lecture, self-assessment questions (SAQs) within the lectures, bespoke distance education notes, and direction to (take it or leave it) resources. Guidance on how, when and whether to use resources is provided in the Weekly Workbook. All of this is reinforced by tutors in live online and campus tutorials.

Assessment includes some **Tolerance for error** to encourage students to learn. Self-assessment questions, provided half-way through and at the end of each lecture, give students penalty-free feedback on their responses; in addition low-stakes continuous assessment scaffolds both online orientation and the project module.

All of the resources are designed to be **Simple and intuitive** so that student focus can move quickly to new content learning, as opposed to getting stuck on orientation and navigational learning.

Figure 6: Sample Learning Mode - Optional Self-Assessment Questions within E-Lectures

We try to make systems within our control easy to understand, regardless of the user's previous experience or IT knowledge (allowing **Equity of Use**). Where possible, design templates are consistent so students only need to orientate once (i.e. navigate and locate).

Figure 7: Sample Learning Mode – Direction to Optional Resources

Only one third of the programme is delivered in semester I, so students (who need it) have plenty of time to settle into University and learn the systems, without being overloaded with content. The remaining two thirds are delivered in semester 2. Presentation of all aspects of weekly content is identical in every module; this includes Blackboard, document design, assessment instruction headings and feedback design. For example, the Blackboard layout for each module is consistent (Figure 8), so once orientation and navigational learning has been achieved early in the first module/semester, no further navigational learning should be necessary, allowing students to focus on content engagement and OSH learning. In another example, each module assignment has an associated rubric, in a standard format. Rubrics are **Simple and intuitive**, easy to understand, regardless of the user's experience, knowledge, or current concentration level (**Equity of use**), with an expectation of increasing engagement by students for rubric use in each sequential module (to the extent that the students chooses to do so). At assignment planning stage, students can therefore see exactly what's required to achieve high grades. This allows students who are confident to simply get on with it, while discreetly supporting those who are new to third level learning (Figure 9). Tutors refer to the rubrics a) when introducing students to assignments during face-to-face UCD tutorials, b) during the pre-assignment live online Blackboard Collaborate tutorials and, finally, c) to grade and provide feedback via Blackboard. The programme coordinator uses the rubrics to aim for a consistent standard of grading between tutors.

Noticeboard — Announcements

Module Information
- Module Descriptor
- Module Schedule
- Module Overview

Assessment
- Assignment Instructions & submission link
- Online MCQ instructions and MCQ link
  - *CSHW assignment submission form / title page*
  - *UCD Plagiarism Policy*
  - *UCD Extenuating circumstances Policy*
  - *UCD Late submission policy / form*

Staff Roles & Contacts — Staff roles and contact information

Learning Activities

Lecture Session Resources
- Weekly Workbook
- E-Notes
- E-Lecture & Slides
- E-Resources

College Knowledge
- Study Skills Lectures
- Factsheets

Weekly Web-blog (Groups)

Module Blackboard Tutorial

Student Chat Room

Email

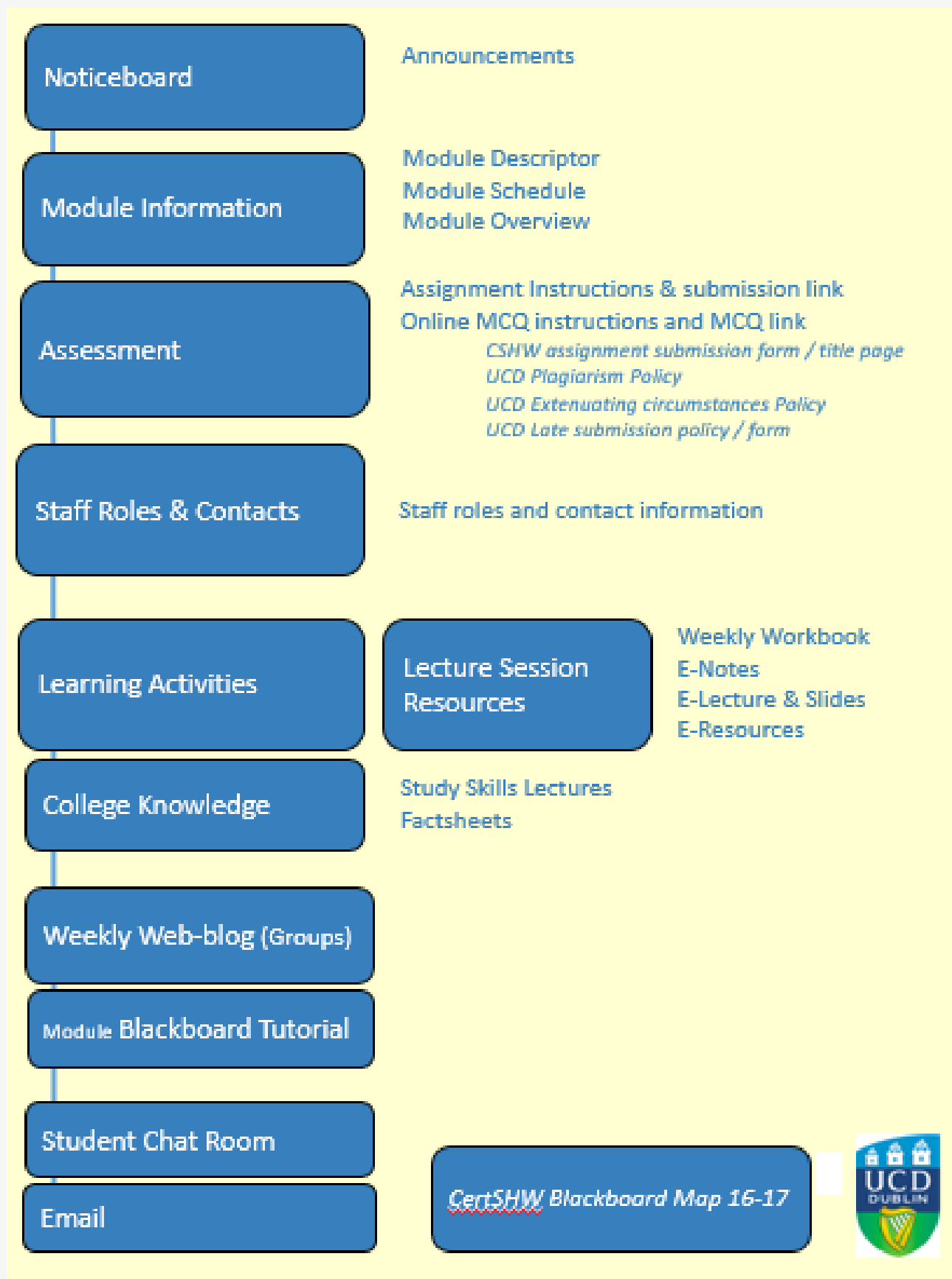*CertSHW Blackboard Map 16-17*

UCD DUBLIN

Figure 8: Layout and Content of all Blackboard Modules

College Knowledge

You can use the rubric in several ways:

1. Use it **before commencing your assignment** to help you to clarify what you are aiming for.
2. Use it **before submitting your assignment** as a checklist for what you may or may not have addressed.
3. Use it **before submitting your assignment** as a form of self-assessment; see what descriptor area you think the majority of your own work falls into: poor, fair, good, very good, or excellent? This is **self-assessment**. Keep a copy to compare with the one your tutor has completed at a later stage.
4. Ask a friend or family member to proof-read your work; they can advise you on spelling and grammar, and this can be very valuable
5. When the rubric is returned to you (essentially it is **individualised feedback from your tutor**) along with your grade, reflect on its content, and identify the areas that you think you could improve on. Compare it to the rubric you self-assessed earlier and ask yourself whether your assessment and your tutor's assessment are in broad agreement.

We suggest you do at least 1 and 2 at this stage of the programme, but if you want to use the other suggestions, feel free!

Figure 9: Student Guide to using Rubrics

Online student collaboration is encouraged, helping to create a **Community of learners**. While working adult students naturally capitalise on and share informal knowledge, we were concerned that students may not have the same capacity to collaborate, and that this valuable learning opportunity could be reduced in online delivery. In practise the **Flexibility in use** of one or a combination of a) a live campus tutorial. B) a live Blackboard Collaborate Ultra tutorial in each module, c) the formal weekly Web-Blog communication (a discussion forum moderated by group tutors) and d) the formal student-only chat room (plus informal tutorial group WhatsApp forums), worked to help students make long-lasting and valuable working collaborations. This works despite the bulk of student learning taking place remotely, and it also reduces travel time and time away from work and families. This **Flexibility in use** and **Equitable use** ensures that students from very diverse educational (level and discipline) and professional backgrounds as well as geographic location can provide support to one another throughout the programme and establish working relationships that last beyond the programme's end.

How do we know it worked?

We found that blended online learning offered many opportunities for integrating study supports using adult learning and Universal Design principles, thereby enhancing the experience for both students and staff.

Impact

Several indirect and direct indicators (usage of, and feedback on, specific resources, attrition rates) can be used to assess impact. While we cannot attribute impact directly to any single design component, we are confident that Universal Design is a factor in this programme's success.

The University's centrally-collected student feedback (2014-16) on the programme's modules delivered very positive overall feedback, with mean scores ranging from 4.1 to 4.6 (maximum possible = 5) on all five core items for the taught modules, however the response rate (range 33 – 63%) was not optimum.

We therefore also collect programme-level student feedback using a final day in-class survey (2015-16, n = 121, response rate 84%). Results for 'helpfulness to learning' of the optional resources are shown in Figure 10. It is notable that 60% of students on this level 7 programme that year already had pre-entry qualifications at or above level 7 (application data). Theoretically these students should not have needed study skills support, however evaluations show that the majority found them helpful or very helpful to learning.

Qualitative feedback (Figure 1 above) included constructive feedback and positive comments on many of the design features addressed in this chapter.

Finally, while acknowledging that attrition is multi-factorial (Sener and Hawkins, 2007) taking account of the triple threats (adult, part-time, asynchronous online learning) to retention, we have seen an extremely low attrition rate (< 10% between 2013 and 2015 and < 5% in 2015-16), particularly compared to rates reported for online courses (20% - 80%) (Tyler-Smyth, 2006).
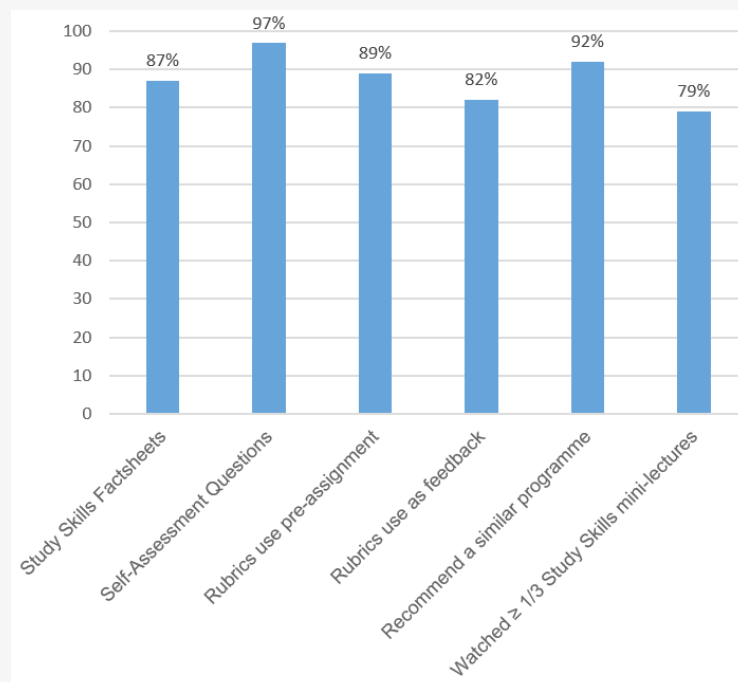

Figure 10: Helpfulness to learning of 'optional' resources

Advice to others for implementation

- Focusing on embedding orientation and navigational aspects of the programme continuously, as opposed to using an up-front student handbook, can result in **Flexibility in use** and be mutually beneficial for students, tutors and staff. We find that students' narrow their focus much earlier to programme content than previously.

- Providing **Simple and intuitive** just-in-time, bespoke materials for new students in the early stages of the programme can be more efficient (for staff) and more effective (for students).

- Consider overtly presenting supports you would like students to use as being completely optional to allow **Flexibility in use**, and use non-credit bearing assessment to allow **Tolerance for error**.

- 'Branding' a diverse range of supports into a common single entity (College Knowledge) can give students a framework through which to recognise, and use, supports, including using each other, thus helping to create a **Community of Learners**.

- You don't necessarily need to be able to see a final product when starting improvements. Developing our resources was more an evolvement process than a light-bulb moment and is still an ongoing developmental task.

- While existing UCD guidance for new students is excellent, there is so much, located in so many places that some students can be overwhelmed. If this is the case with your students, then taking the time to develop bespoke resources, can be more effective and a good investment and facilitate **Equitable use**.

- We didn't overtly plan to include Universal Design principles but found that it emerged from using both adult learning and blended learning practises. It's possible that minor changes to your existing systems could be all that is needed to find Universal Design principles within your programme.

References & resources

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